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**DETAILED ACTION**

Claims 1-22, 25 and 27-31 are pending in the application. Claims 9-11, 13-14, 17-18, 20-22, 25, 27-28 and 30-31 are withdrawn from further consideration. Claims 1-8, 12, 19 and 29 are rejected. Claims 15-16 are objected to.

***Election/Restrictions***

Applicant's election with traverse of the species of Example 93 to prosecute the invention of Group I, claims 1-22 and 29, in the reply filed on August 4<sup>th</sup>, 2009 is acknowledged. The traversal is on the ground(s) that there the examination of both groups can be performed without serious burden. This is not found persuasive because the inventions are independent and distinct because there is no patentable co-action between the groups and a reference anticipating one member will not render another obvious. Each group is directed to art recognized divergent subject matter which require different searching strategies for each group. Moreover, the examiner must perform a commercial database search on the subject matter of each group in addition to a paper search, which is quite burdensome to the examiner.

The requirement is still deemed proper and is therefore made **FINAL**.

Claims 25, 27-28 and 30-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on August 4<sup>th</sup>, 2009.

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As per MPEP 803.02, the examiner will determine whether the entire scope of the claims is patentable. Applicants' elected species of example 93 appears allowable. Therefore, according to MPEP 803.02: should the elected species be found allowable, the search of the Markush-type claim will be extended. If the search is extended and a non-elected species found not allowable, the Markush-type claim shall be rejected and claims to the nonelected invention held withdrawn from further consideration. The search of the Markush-type claims has been extended to include species: N,N-diethyl-3-(2-(phenylsulfonamido)phenyl)propiolamide, which is not allowable.

As a non-elected species has been found not allowable, the Markush-type claims have been rejected and claims to the nonelected invention held withdrawn from further consideration.

Claims 1-22 and 29 have been examined to the extent that they are readable on the elected embodiment, example 93, and the above identified nonelected species. Since the nonelected species has been found not allowable, subject matter not embraced by the elected embodiment or the above identified nonelected species is therefore withdrawn from further consideration. Claims 1-8, 12, 15-16, 19 and 29 read on the above identified species.

It has been determined that the entire scope claimed is not patentable.

Claims 9-11, 13-14, 17-18 and 20-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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***Priority***

This application is a 35 U.S.C. 371 National Stage Filing of International Application No. PCT/US03/40745, filed December 18<sup>th</sup>, 2003, which claims priority under 35 U.S.C. 119(e) to Provisional Application No. 60/435123, filed December 19<sup>th</sup>, 2002.

***Information Disclosure Statement***

The Examiner has considered the Information Disclosure Statement filed on April 1<sup>st</sup>, 2005.

***Specification***

Applicant is reminded of the proper content of an Abstract of the Disclosure.

In chemical patent abstracts for compounds or compositions, the general nature of the compound or composition should be given as well as its use, e.g., "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." Exemplification of a species could be illustrative of members of the class. For processes, the type reaction, reagents and process conditions should be stated, generally illustrated by a single example unless variations are necessary.

The abstract of the disclosure is objected to because it neither provides for the general nature of the compound(s) nor exemplifies any members or formulae illustrative of its class. Correction is required. See MPEP § 608.01(b).

It is suggested that Applicant revise the abstract to include a structural depiction of the compounds claimed.

Complete revision of the content of the abstract is required on a separate sheet.

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### ***Claim Objections***

Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The parent claim (1) does not provide for R4 to be hydrogen.

In claim 16, it is suggested that Applicant delete the word "and" between the species defined as (20) and (21). It is further suggested that Applicant delete the word "and" before the phrase "or a pharmaceutically acceptable salt thereof" at the end of claim 16.

It is suggested that Applicant amend claim 29 to replace the phrase "a compound according to any of Claim 1" with the phrase "a compound according to Claim 1".

Claim 14 is objected to because the phrase "wherein is 2" is apparently a typographical error and should read "wherein *n* is 2" since the only variable in the parent claim that can have a value of 2 is "*n*".

Claims 15-16 are objected to as being drawn to (in part) non-elected subject matter.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8, 12, 19 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 1-8, 12, 19 and 29 are rejected because they are inclusive of the limitation of "isomer;" however, this term has not been defined in the specification beyond stating that stereoisomers and geometric isomers are within the scope of the invention. The standard interpretation of the generic term isomers is any of two or more substances that are composed of the same elements in the same proportions but differ in properties because of differences in the arrangement of atoms. From this definition, any compound with the same element count as compounds according to Formula I would be within the scope of the claims. It is suggested that Applicant amend the claim to remove this limitation or specifically claim types of isomers that have support in the specification.

Claim 1-8, 12, 19 and 29 are rejected because they are inclusive of the limitation of a "prodrug" where Applicant has not defined prodrug in the specification. From this lack of definition, the metes and bounds of the term "prodrug" are indefinite. Prodrugs in general, are compounds, which undergo *in vivo* conversion to parent active drugs. In that sense, recitation of prodrug is acceptable; however, the definitions of various variable groups (such as R<sup>4</sup>) include structural and functional groups, namely esters, amides, etc. and therefore the difference between these variable groups and the prodrug groups is not clear. There is clear-cut ambiguity as to what is to be considered as prodrug and what is not. Applicants should note that if the variable groups are prodrug moieties, which are in general inactive but becomes active upon *in vivo* transformation, then the compound bearing the variable group would be deemed as inactive which is not what the claim recites.

Furthermore, the issue of second paragraph is whether the structures of the claimed compounds are clearly defined. Applicants' prodrugs are molecules whose structure may lie outside the subject matter of the compounds of

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formula (I), but upon metabolism in the body are converted to active compounds falling within the structural scope of compounds of formula (I). The claim describes the function intended but provides no specific structural guidance to what constitutes a "prodrug". Structural formulas, names, or both can accurately describe organic compounds, which are the subject matter of claim 1. Attempting to define means by function is not proper when the means can be clearly expressed in terms that are more precise.

***Claim Rejections - 35 USC § 102***

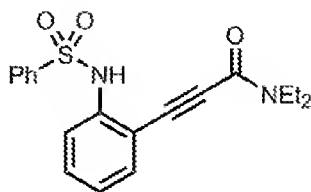
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-7, 12 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al. Heterocycles, 1986, 24, 2127-2131. (NOTE: This reference was provided in the Information Disclosure Statement filed by Applicant on 1 April 2005.)

Johnson et al. teach N,N-diethyl-3-(2-(phenylsulfonamido)phenyl)propiolamide (depicted below) on page 2129 as compound number **15**.



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The above compound is embraced by Applicants definitions in that  $R^1$  is aryl (phenyl),  $R^2$  is hydrogen, Q is  $C^2$  alkynylene, n is zero, W is nitrogen (q is therefore one),  $R^{3'}$  is alkyl (ethyl) and  $R^3$  is alkyl (ethyl).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew P. Coughlin whose telephone number is (571)270-1311. The examiner can normally be reached on Monday through Thursday from 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew P. Coughlin/      /Rebecca L Anderson/  
Examiner, Art Unit 1626    Primary Examiner, Art Unit 1626